Our Children's Teeth

Beyond Brushing and Braces

CALIFORNIA DEPARTMENT OF HEALTH SERVICES
MATERNAL AND CHILD HEALTH BRANCH

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Our Children's Teeth: Beyond Brushing and Braces
Prepared by the California Department of Health Services,
Maternal and Child Health Branch

This report does not necessarily reflect the views
of the California Dental Health Foundation.

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Dedication

This report is dedicated to the thousands of children who received an oral examination to collect the information contained in the needs assessment and to their parents or guardians who participated in the needs assessment.

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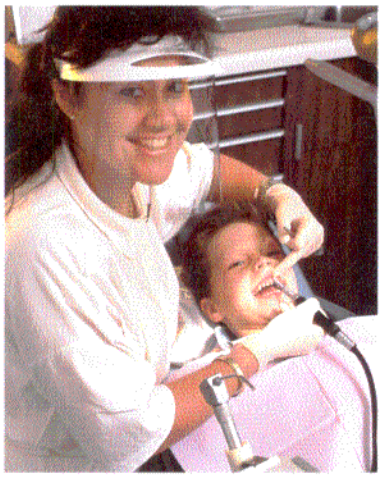
Foreword

The purpose of this report is to describe the status of our children's oral health and to present approaches to improve it. The goal of the editors is to present a clear and concise distillation and summary of the findings and recommendations in the *Report of the California Oral Health Needs Assessment, 1993-94.*

Tooth decay and gum disease are the most prevalent human disorders known. Except in the earliest stages, they are irreversible and cumulative, with advanced conditions resulting in expensive treatment, disfigurements, or nutritional problems from the loss of teeth.

Although universally accepted as part of comprehensive primary health care, dentistry is delivered through a completely separate system than medical care. As a result, unique issues and problems have evolved for dental service delivery that are not comparable to the medical model.

Through an understanding of the status of our children's oral health, as well as the various modes of prevention and treatment strategies available in modern dentistry, we can implement the best dental programs for our children as part of their overall health needs.



Oral Health Needs Assessment

Description

The Omnibus Budget and Reconciliation Act of 1989 (OBRA 89) mandated that the Maternal and Child Health (MCH) Title V block grant applications from states to the federal bureau of MCH include a description of the needs of children and families on a variety of health indicators including oral health.

Our current knowledge of the dental health of all children in California is very limited. Because of the paucity of data on the dental status and needs of California's children, the California Department of Health Services, MCH Branch, in collaboration with the California Dental Health Foundation, conducted an oral health needs assessment of children ages 2 to 15 years old.

- A series of three needs assessments* were conducted in 1993-94 to provide an accurate picture of the dental health needs of children in the state including an oral examination needs assessment, a cross-sectional epidemiologic needs assessment, and a community leaders opinion needs assessment.
- The needs assessments included 6,792 children in 10 geographic areas of California.* Special emphasis was placed to ensure adequate representation of fluoridated, unfluoridated, urban, and rural areas.
- Three different age groups were targeted for inclusion in the needs assessments: preschool, elementary school, and high school children.

** This is not a representative sample of all of California's children.*

Needs Assessment Design

Dentists and pediatric dentists were recruited from various sources: primarily from private practice with assistance from the California Dental Association, the California Society of Pediatric Dentists, and other organizations.

In addition to clinical assessments, questionnaire needs assessments were mailed to dentists, physicians, and a variety of community leaders including school nurses, local health officers, school teachers, and elected officials. These needs assessments examined perceptions of the oral health needs of children and the potential for change in improving oral health through government and community action.

The needs assessment results showed that the community leaders believed dental disease was the most prevalent of health issues affecting children and that dental services were not always available for prevention and treatment.

Oral Health Needs Assessment Findings

Baby Bottle Tooth Decay

Baby Bottle Tooth Decay (BBTD) or Early Childhood Tooth Decay is a form of dental decay in toddlers attributed to the overuse of a baby bottle for feeding. Early treatment of tooth decay is essential to prevent further destruction and pain.

NEEDS ASSESSMENT FINDINGS

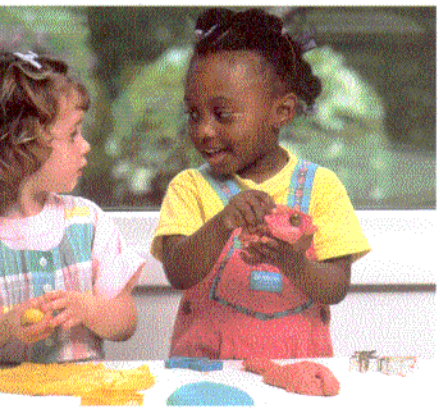
- 14% of all preschool children had BBTD (one or more teeth affected).
- 33% of Head Start children and 13% of non-Head Start preschool children had BBTD.
- Only 68% of parents/guardians used feeding practices that prevent BBTD.
- Parents/guardians who did not graduate from high school were more likely not to use appropriate feeding practices.

GAPS IDENTIFIED

- The prevalence of BBTD was as high as 45% for Asian children in Head Start preschools in fluoridated urban regions.
- Hispanic children in Head Start preschools in non-fluoridated urban areas had the second highest prevalence of BBTD (40%).
- Only 0.4% of white non-Head Start preschool children in fluoridated urban areas had BBTD.

RECOMMENDATIONS

- Promote breastfeeding and its benefits.
- Inform parents of all newborns of the importance of adequate feeding practices and bottle feeding techniques to prevent BBTD.
- Develop culturally appropriate educational materials targeted to those groups at highest risk for BBTD such as Asian Americans and Hispanics.
- Continue developing ways to train providers who care for families with very young children on how to counsel parents and caregivers on appropriate feeding practices.



Assessment Findings

Children in Preschools

It is common practice for parents to take children to the pediatrician for their immunizations and well-baby checkups in the preschool years. However, in the absence of a dental examination, the child is at risk for tooth decay and gum disease. A routine visit to the pediatrician is an opportunity for early referral for an examination by a dentist. Undiscovered tooth decay in preschoolers can begin a lifetime of tooth destruction and pain. Since dentistry is delivered in a completely separate system, most parents neglect to make a dental examination part of preschool children's care, even if the pediatrician makes a referral.

NEEDS ASSESSMENT FINDINGS

- 26% of children in the needs assessment had no dental insurance.
- 21% depended on Medi-Cal for their dental care.
- 44% of parents/guardians of preschool children indicated that their child had never visited a dentist.
- 31% of all preschool children had some treated and untreated tooth decay.
- 27% of all preschool children had untreated tooth decay.
- Although 56% of parents indicated that they had taken the child to the dentist, only 20% of preschool children had completed needed dental care.
- 9% of Head Start preschool children were in urgent need of dental care.

GAPS IDENTIFIED

- With the exception of African-American children, all other ethnic groups of preschool children (Asians, Hispanics, whites) had a lower prevalence of tooth decay in fluoridated areas compared to unfluoridated urban and rural areas, when the sample was adjusted for Head Start status.
- 79% of Asian children in non-fluoridated urban areas in Head Start preschools had untreated or treated tooth decay with an average of 4.5 teeth affected.
- Only 10% of white children in non-Head Start preschools in fluoridated urban areas had untreated and treated tooth decay, with an average of 0.3 teeth affected.
- Hispanic children in rural non-Head Start preschools had the highest percentage of untreated tooth decay of any group examined, with an average of 2.3 teeth affected (56%).
- White children in non-Head Start preschools in fluoridated urban areas had the lowest percentage (5%) of untreated tooth decay.

RECOMMENDATIONS

- Promote statewide fluoridation efforts.
- Promote the use of fluoride supplements when adequate water fluoridation is not feasible.
- Place special emphasis on referral of children to early dental care at Head Start sites and the Child Health and Disability Prevention Program.
- Emphasize the importance of brushing and flossing in preschool curricula.
- Develop culturally appropriate educational and outreach programs targeted to Hispanic and Asian-American preschoolers.

Assessment Findings

Children in Kindergarten Through Third Grade

While the beginning of the loss of the baby teeth around age 6 is a major event in the child's perception, it is also a critical time when visits to the dentist to prevent irreversible damage to the permanent teeth should begin.

NEEDS ASSESSMENT FINDINGS

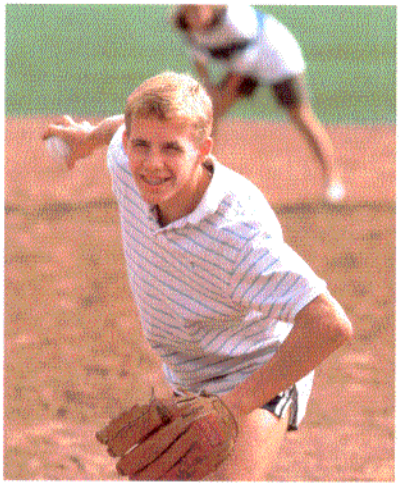
- 69% of all children in grades K-3 (mean age 6.9 years) have had some tooth decay.
- Only 10% of 8-year-old children have received protective sealants on the occlusal (chewing) surface of at least one of the four permanent first molar teeth.
- 54% of 8-year-old children from non-poor families in fluoridated areas had a sealant, compared to only 1% of Hispanic 8-year-old children from all income groups in rural areas.
- 53% of all children in grades K-3 had some untreated tooth decay.

GAPS IDENTIFIED

- Asian children in non-fluoridated urban areas had the highest percentage of untreated tooth decay of any group (71%).
- Hispanic children in non-fluoridated urban areas had the highest number of untreated decayed teeth with an average of 3.0 teeth affected.
- White children in fluoridated urban areas were the group with the lowest percentage of untreated tooth decay (21%).

RECOMMENDATIONS

- Promote statewide fluoridation efforts.
- Promote the use of fluoride supplements when adequate water fluoridation is not feasible.
- Target efforts to reach the Asian-American community on the importance of preventive dentistry and oral health needs of children.
- Inform clients of the availability of sealants as a Medi-Cal benefit.
- Place special emphasis on referral of children to early dental care.
- Develop alternative approaches to deliver dental sealants, such as school-based/linked sealant programs.



Assessment Findings

Students in High School

High school students present conditions beyond those of younger children. The primary teeth have been replaced by permanent molars, and the second permanent molars erupt behind the first permanent molars at about age 12. In addition, children who have not had appropriate orthodontic care may begin to develop disfigurement of the face.

NEEDS ASSESSMENT FINDINGS

- 78% of all high school students in grade 10 (mean age of 15.9 years) have had some tooth decay, with an average of 4.0 teeth affected.
- 13% of 15-year-old students have received protective sealants on the occlusal (chewing) surfaces of at least one permanent molar tooth.
- 9% of 15-year-old students have received protective sealants on at least one permanent first molar tooth.
- 6% of 15-year-old students have received protective sealants on at least one permanent second molar tooth.
- 16.5% of all 10th graders had moderate to severe orthodontic needs.

GAPS IDENTIFIED

- 90% of Hispanic students in non-fluoridated urban areas had untreated or treated tooth decay, with an average of 5.8 teeth affected.
- African-American students in fluoridated urban areas had the lowest proportion of untreated or treated tooth decay (58%).

- White students in fluoridated urban areas had the lowest average number of teeth affected (2.3).
- While 33% of white students in fluoridated urban areas had a sealant, no Asian students and 6% of Hispanic students in fluoridated urban areas had a sealant.
- 36% of Hispanic students in grade 10 in non-fluoridated urban areas had an urgent need for dental treatment.
- Although 60% of Hispanic children had orthodontic needs, only 5.8% were undergoing treatment.

RECOMMENDATIONS

- Promote statewide fluoridation efforts.
- Promote the use of fluoride supplements when adequate water fluoridation is not feasible.
- Target efforts to inform the Hispanic community of the importance of including routine dental care visits as part of the routine ongoing pediatric care.
- Inform clients of the availability of sealants as a Medi-Cal benefit.
- Place special emphasis on referral of children and adolescents to early dental care.
- Inform clients of the availability of orthodontic services as a benefit of the Medi-Cal and California Children Services programs.

Current State Programs

California Children Services

California Children Services (CCS) provides medical care for children younger than 21 years of age who have eligible handicapping conditions. Services are provided to these children through county CCS programs and state regional offices that authorize medical care for CCS clients to be provided by CCS panelled providers. For most conditions, ongoing care is delegated to either special care centers or medical therapy units.

Dental services are provided to CCS clients when it has been determined by the CCS program medical consultant that

- the medical condition is impacted by the oral health of the child,
- the CCS eligible condition makes dental care difficult,
- the CCS eligible condition directly causes a dental problem, and
- the nature or severity of the disease makes dental care a necessary part of the management of the CCS condition.

Further, CCS provides medically necessary orthodontic services to children with handicapping malocclusion, cleft palate, and/or craniofacial anomalies. Recent efforts by State Children's Medical Services (CMS) Branch staff have contributed to policy revisions in the CCS orthodontic program that improve medical eligibility determination.

Child Health and Disability Prevention Program

The Child Health and Disability Prevention (CHDP) Program is a federally- and State-funded preventive health care prevention program for Medi-Cal beneficiaries younger than 21 years of age, children of low income families who are younger than

19 years of age, and children participating in Head Start or specified state preschool programs. Each CHDP child is eligible to receive a periodic, comprehensive examination that includes a dental assessment. The most frequent reason for a referral from a CHDP health assessment is for a dental problem. Regardless of whether a dental condition is detected, CHDP clients are to be referred annually for preventive dental services beginning at 3 years of age.

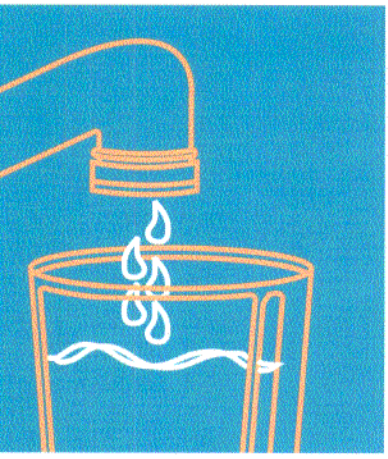
In response to the severity of dental problems in the CHDP population, the State CMS branch has developed and implemented a variety of preventive dental programs/activities. These include educational materials for health care professionals on the prevention of BBTD, the adoption of a CHDP dental periodicity schedule for pediatricians, and nine regional workshops on private-public partnerships to increase access to dental care for low income children.

Dental Disease Prevention Program

The Dental Disease Prevention Program (DDPP), mandated under the Health and Safety Code Section 360-371.5 (Senate Bill 111), provides funds to local agencies for comprehensive dental disease prevention efforts. The program currently serves 315,000 children in preschool and elementary schools. The DDPP is funded at $1.6 million of State general funds and the program consists of weekly fluoride rinses of daily fluoride supplements with oral health education classes.

Denti-Cal

Denti-Cal is the dental portion of the State of California medical program. Dental services are provided for children to 21 years of age.



The Need for Fluoridation

Community water fluoridation is the single most effective and efficient means of preventing dental caries (*Healthy People 2000*). In areas where the water supply is deficient in fluoride, prescription fluoride supplements are recommended by the American Dental Association.

NEEDS ASSESSMENT FINDINGS

The California Oral Health Needs Assessment, 1993-94 found the statistics below.

- Children in fluoridated urban areas had less tooth decay than those in non-fluoridated urban and rural areas.
- Children in Head Start preschools in non-fluoridated areas had, on the average, 15% more tooth decay than in fluoridated areas.
- Children in Head Start preschools in rural areas had, on the average, 56% more tooth decay than those students in fluoridated areas.
- Children in non-Head Start preschools in non-fluoridated areas had, on the average, 18% more tooth decay than in fluoridated areas.
- Children in non-Head Start preschools in rural areas had, on the average, 206% more tooth decay than those students in fluoridated areas.
- All students in grades K-3 and all students in grade 10 (Asians, African Americans, Hispanics, and whites) had a lower prevalence of tooth decay and untreated tooth decay in fluoridated areas compared to non-fluoridated urban and rural areas.

- Students in grades K-3 in non-fluoridated areas had, on the average, 43% more tooth decay than in fluoridated areas.
- Students in grades K-3 in rural areas had, on the average, 36% more tooth decay than those students in fluoridated areas.
- Grade 10 students in non-fluoridated areas had, on the average, 54% more tooth decay than those in fluoridated areas.
- Grade 10 students in rural areas had, on the average, 36% more tooth decay than those students in fluoridated areas.
- Of preschoolers and K-3 students living in non-fluoridated urban or rural areas, 71% and 88% respectively, were currently not taking prescription fluoride.

RECOMMENDATIONS

- Promote community water fluoridation as the single most effective means of preventing dental caries regardless of race or income.
- Prescribe fluoride supplements for daily use until age 16 only where community water fluoridation is not available. Ensure that new American Dental Association and American Academy of Pediatrics dosage schedules are followed to decrease the risk of fluorosis.
- Use fluoride toothpaste regularly for additional protection against tooth decay.

Summary

Recommendations

The following is a summary of recommendations to improve the oral health of children in California.

- Promote breastfeeding and its benefits and inform parents of all newborns of the importance of adequate feeding practices and bottle feeding techniques to prevent baby bottle tooth decay.
- Promote community water fluoridation as the single most effective means of preventing dental caries in children and adults, regardless of race or income level.
- Prescribe fluoride supplements for daily use until age 16 where the water supply is deficient in fluoride using the new American Dental Association dosage schedule (*ADA News,* May 16, 1994).
- Use fluoride toothpaste regularly to provide additional benefits in the prevention of tooth decay.
- Place special emphasis on referral of children to early and periodic dental care at Head Start sites and the Child Health and Disability Prevention Program. Inform clients of the availability of sealants as a Medi-Cal benefit.

- Emphasize the importance of oral hygiene, fluoride use, and dental sealants in school curricula.
- Develop culturally appropriate educational and outreach programs targeted to those at highest risk for dental health problems.
- Target efforts to inform communities of the importance of including routine dental care visits as part of the routine ongoing pediatric care.
- Place special emphasis on referral of children and adolescents to early and periodic dental care.
- Provide necessary counseling to new elementary school and high school students for appropriate diet, fluoride use, and oral hygiene methods to prevent tooth decay.
- Apply dental sealants after the emergence of first and second permanent molars to prevent tooth decay in the pits and fissures.
- Place emphasis on the delivery of dental sealants in school-based/linked settings.
- Inform clients of publicly-funded programs regarding the availability of orthodontic services.

Appendix

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